



SCOPE OF SERVICES

Solicitation Number: CLMP324

Project Name: Project Connect – Water/Wastewater Utility Support Program

PROJECT FOR:

CITY OF AUSTIN, AUSTIN WATER, THROUGH ITS CAPITAL CONTRACTING OFFICE

PROJECT TITLE:

Major Water/Wastewater Conflicts with Project Connect

OBJECTIVES OF THE PROJECT:

The objective of this project is to evaluate alternative approaches for the resolution of major water, wastewater and reclaimed water utility conflicts along the Project Connect light rail project (Exhibit 1) and the IH35 Central project, and to provide design recommendations, as needed and required to facilitate the successful completion of Project Connect and IH35 Central project. There are numerous subsurface conflicts with Austin Water utilities along the proposed light rail alignment, and some are considered as “major” (water or reclaim water transmission lines 24 inches diameter or greater, and wastewater conveyance lines 36 inches diameter or greater). Several priority conflicts have been initially identified by Austin Water that require additional consideration and evaluation (Exhibit 2). Austin Water requires engineering support to ensure that risk is managed, and that all Austin Water customers are adequately serviced during the design and construction of the Project Connect light rail. An evaluation of alternative scenarios and selection of preferred solutions for the major utilities is required to ensure satisfactory short- and long-term resolution of Austin Water issues. Anticipated increases in future water/wastewater demand within the impacted area will be addressed to identify potential synergies with future development. Possible shared impacts by the TxDOT IH35 Central project and Project Connect will also be addressed. Refer to the attached Exhibits for the conceptual limits of the project.

BACKGROUND:

Project Connect is a comprehensive transit plan designed to enhance public transportation in Austin. It includes a new rail system, a downtown transit tunnel, an expanded bus system and a transition to an all-electric fleet. Project Connect involves multiple stakeholder agencies within City of Austin and partner agencies. The Austin Transit Partnership (ATP) is an independent organization formed to manage the Project Connect investment, including design and construction of the new transportation infrastructure. Coordination is ongoing between ATP, Capital Metro, Austin Water, Austin Energy, planning and design consultants, and the public for implementation of Project Connect (<https://www.capmetro.org/project-connect>).

The Project Connect light rail includes at-grade or elevated portions of the proposed Orange Line and Blue Line, and segments of light rail transit (LRT) within tunnels in downtown Austin. Examples of more significant utility conflicts identified to date include the following:

- Blue line (water):
 1. 66-inch concrete steel cylinder (CSC) water line along Trinity Street from 5th Street to 2nd Street (approximately 1100 ft; also an Orange Line conflict).
 2. 48-inch (becomes 60-inch north of intersection) and 24-inch CSC transmission water lines crossing the proposed LRT at intersection of South Pleasant Valley Road and East Riverside Drive.
 3. 24-inch CSC water line along portions of the proposed LRT on Riverside Drive including:
 - Royal Crest Drive to Willow Creek Drive (approximately 1700 ft),
 - Wickersham Lane to Faro Drive (approx. 3000 ft),
 - Montopolis Drive to SH-71 (approx. 4700 ft),
 - Near Palma Verde Drive (approx. 500 ft), and
 - South of SH-71 approaching the airport (approx. 1200 ft).
 4. Multiple distribution water lines at Highway 183 and East Riverside Drive/Ben White Avenue that must be maintained in service and require TxDOT coordination.
 5. 24-inch cast iron (CI) water line crossing the LRT at Cesar Chavez Street and Trinity.
- Blue line (wastewater):
 1. Two 24-inch and one 18-inch wastewater lines crossing East Riverside Drive at/between Wickersham Lane and Pleasant Valley Road (near the water conflict, above) that need added capacity.
 2. 48-inch concrete wastewater line crossing Riverside near the TxDOT building at 200 E Riverside Drive, and then along Riverside west of I-35 (approx. 1000 ft; also an Orange Line conflict).
 3. 42-inch wastewater gravity main crossing the LRT just north of Lady Bird Lake (also an Orange Line conflict).
 4. 24-inch wastewater line at Cesar Chavez Street and Trinity
 5. 24-inch concrete wastewater line crossing east of Highway 183 and East Riverside Drive/Ben White Avenue that will require TxDOT coordination.
- Orange Line (water):
 1. 54-inch, 66-inch and 72-inch CSC water line crossing at 2nd Street and between 2nd and 3rd/along Guadalupe (approximately 250 ft; also a Blue Line conflict).
 2. 48-inch CSC water line along Lamar Boulevard from the triangle intersection with Guadalupe to Morrow Street (approximately 11,000 ft).
 3. 20-inch cast iron water line along Lamar Boulevard from the Triangle (near Capitol Court) to Old Koenig Lane.
 4. Multiple conflicts with site infrastructure at the North Austin Reservoir Project at Lamar Boulevard and Koenig Lane.
 5. 24-inch CSC water line from Deen Avenue to Braker Lane along Lamar Boulevard

- Orange Line (wastewater):
 1. 36-inch concrete wastewater line crossing South Congress Avenue at Williamson Creek.
 2. 48-inch wastewater line along Riverside near Barton Springs Rd (approximately 400 ft; also a Blue Line conflict).
 3. 48-inch, 30-inch and 24-inch FRPM crossing North Lamar Boulevard along Little Walnut Creek.
 4. 54-inch RCP crossing North Lamar Boulevard along Walnut Creek.
 5. 78-inch fiberglass reinforced polymer-mortar (FRPM) wastewater line, a.k.a. the downtown wastewater tunnel, along Riverside Drive (approx. 1500 ft).

Conflicts are also present along proposed upgrades to the existing Metrorail Red Line commuter train. There may be potential synergies of resolving Project Connect conflicts with utility conflicts associated with the TxDOT IH35 Central project.

The following documents are made available as existing efforts and background for this project:

1. 15% design drawings and documents by AECOM dated June 27, 2021 for the Orange Line. This design submittal identifies the initial LRT footprint and utility conflicts for the Orange Line. Includes a draft 15% Conceptual Engineering Report, existing utilities plan drawings, and matrix of potential major utility conflicts.
2. 15% design drawings and documents by HNTB and Cobb Fendley dated June 15, 2021 for the Blue Line. This design submittal identifies the initial LRT footprint and utility conflicts for the Blue Line. Includes a Schematic Basis of Design Report, the Blue Line LRT plan and profile drawings, existing utility layout schematic drawings, and a matrix of potential major utility conflicts.
3. 30% design drawings and presentation dated July 2021 by Huitt-Zollars for the proposed McKalla Station, which includes improvements of the existing Red Line commuter rail between just south of Rundberg Lane and just north of Braker Lane. Some water and wastewater conflicts have been identified; drawings have been requested from the design team.
4. Draft *Utilities Rules of Practice, Light Rail Transit Considerations*, Revision 0 dated June 17, 2021, which describes the methodology for assessing typical utility conflicts along the proposed Blue Line and Orange Line alignments, and the proposed resolution of anticipated conflicts (i.e., whether to relocate the utility or leave the utility in place). Austin Water and other utilities have commented on this document and a revised version is anticipated.

Austin Water requires support for developing and evaluating alternative relocation routes and the associated risks, identifying recommended relocation alignments, estimating schedule and cost requirements for implementation, preliminary engineering, and final design. This project provides a high-level overview of possible utility relocations that will benefit anticipated redevelopment growth in Austin, and assumes that identified utility conflicts are reasonably accurate. Identification of beneficial relocation options will support the mission of Austin Water by potentially enhancing the value of new utility infrastructure associated with the resolution of Project Connect conflicts. Condition assessment of existing water and wastewater

pipes may be required to support this evaluation. Detailed design of selected major utility relocations is anticipated.

ANTICIPATED SERVICES:

The anticipated services will include civil engineering, project management, investigation, analytical study, evaluation, preliminary engineering, design, and other engineering services as necessary for this project. Engineering disciplines under this contract may include civil, environmental, and/or other types of engineering. The services should be performed by engineering firms regularly engaged in municipal capital improvement projects related to water and wastewater infrastructure. The professional services to be provided on this project will consist of development and analysis of alternatives, preliminary engineering, design, and project management. Selected firms should be knowledgeable and experienced in water distribution systems, wastewater collection systems, reclaimed water systems, managing complex projects in urban and environmental sensitive areas, and developing cost effective and efficient recommendations for addressing system improvements. The firm on this project should enhance and compliment the strengths of the City to provide a comprehensive set of resources and skill sets to complete a successful project.

REQUIRED TASKS:**Project Management**

- A. Prepare a Project Management Plan that outlines key items of this project including budget, schedule, and quality assurance/quality control steps/plans.
- B. Develop a communications plan for all appropriate levels of project development and execute plan elements, as required.
- C. Project meetings by the design professionals to generally review the progress, character and quality of the work being performed.

Data Collection

- A. Coordinate to obtain final alignment and details of Project Connect.
- B. Obtain and review the current water system planning documents for this service area to correlate the expected water demands and infrastructure proposed, including review of the Living Unit Equivalents (LUE) projections.
- C. Obtain and review the current wastewater system planning documents for this service area to correlate the expected wastewater demands and infrastructure proposed, including review of the LUE projections.
- D. Assist in the summary and support condition assessment of select water, wastewater, and reclaimed water piping.
- E. Identify subsurface utility engineering (SUE) requirements and provide supplemental SUE services for key data needs.
- F. Coordinate and obtain details on planning and efforts for the IH 35 Central Portion. Identify any major water, reclaimed water, and wastewater items that are impacted by both Project Connect and IH35 Central.

Confirm Conflicts and Perform Alternative Analysis

- A. Based on the work to date by the Austin Water Systems Planning Division and the Project Connect team, confirm major utility conflicts within the limits of construction for Project Connect team.
- B. Conduct an evaluation of major impacts to Austin Water's water transmission and wastewater collection systems from Project Connect. Identify major risk factors.
- C. Review and consider different alternatives to maintain Austin Water's level of service during the construction of Project Connect and IH 35 Central. Include alternative routing, available condition assessment data, and increased pipeline capacity in the evaluation. Rank alternatives with regards to benefit, risk and relative cost. Meet with project team to review alternatives.
- D. Based on preferred ranking of alternatives and project team feedback, perform route analysis and recommend final alignments, including connections for major utility conflicts identified.
- E. Upon conclusion of the review, investigation, and preliminary evaluation, prepare, present and publish details and summarization of the findings, solution options, and a design and construction schedule for each recommended utility (water and wastewater) relocation.
- F. Develop a preliminary sequence of construction plan to maintain water and wastewater service during construction of Project Connect. The consultant shall evaluate limitations and feasibility of keeping sections of the existing lines in service versus diverting flows and abandoning the existing lines.
- G. Identify permitting requirements and prepare cost estimates and implementation schedule.

Preliminary Engineering

Perform preliminary engineering including, but not necessarily limited to, the following work items:

- A. Final alignment determination including design of connections and review of existing land uses. Determine easements to be acquired. Identification of and support of City staff to obtain needed easements.
- B. Evaluate smaller wastewater and water pipe connections to the existing pipelines and proposed relocated pipelines, and design a sequence of construction plan to maintain water and wastewater service during construction of Project Connect.
- C. Conduct preliminary surveying, geotechnical, and soils studies as needed to facilitate the determination of the final alignment. Collect all available information concerning existing and proposed facilities in the project area, including but not limited to, water and wastewater pipelines, telephone, fiber optics, gas electric, drainage facilities, traffic signal systems and the petroleum products pipelines, etc. Determine any site constraints and special permitting requirements (federal, state, local), including recent revisions to the Land Development Code.
- D. Conduct required environmental evaluations including an evaluation of the environmental impact of chosen route and construction methods. The route analysis should include identification of known endangered species and critical environmental

features in the project vicinity, and an evaluation of alignment and working spaces that would create the least amount of environmental impact.

- E. Develop a project phasing plan to address construction timing, construction method, and other factors including environmental and social impacts.
- F. Upon conclusion of the reviews, investigations and preliminary evaluations, prepare, present and publish details and summarization of the findings, solution options, and a design and construction schedule for the recommended interceptor.
- G. Submit preliminary engineering design plans, showing the proposed alignments at 30% plan completion including connections.
- H. Develop a sequence of construction plan to maintain service to all affected service areas while constructing new utilities, then transition existing services to the new utilities in the most cost-effective manner.
- I. Identify permitting requirements and prepare cost estimates and implementation schedule.
- J. If needed, perform hydraulic modeling, sizing analysis, and GIS support to Austin Water.
- K. Support Austin Water in evaluating and verifying the mitigation of stray electrical currents to AW infrastructure.

Design

Upon written authorization from the City, proceed with the final engineering, design, and obtaining permits for the project, including, but not necessarily limited to, the following work items:

- A. Complete geotechnical investigations required to finalize design and provide Geotechnical Data Report.
- B. Prepare and submit detailed plans, draft specifications, construction bid documents and prepare a construction cost estimate at 60% design.
- C. Identify construction staging areas adequate for construction operations.
- D. Develop a mucking plan for trench spoils and identify hauling routes for removing and disposal of spoils.
- E. Provide engineering support and analysis to protect Austin Water's existing and new infrastructure from stray currents and corrosion associated with the new light rail system
- F. Prepare and submit detailed plans, draft specifications, construction bid documents and construction cost estimate at 90% design.
- G. Prepare final plans, specifications, contract manuals and all construction bid documents for the final design.
- H. Obtain regulatory reviews and approvals and obtain permits necessary for the construction of the project.
- I. Confirm the number and size of easements required including supporting the City on easement acquisition and assisting the City on developing and maintaining a schedule for obtaining the easements.

PROPOSED PROJECT SCHEDULE:

The City of Austin will execute the Contract and issue Notice to Proceed within thirty (30) days following the date of City Council approval.

Completion schedule for all tasks is 3 years. A more precise schedule will be developed following the selection of the engineering consultant and the execution of the professional services agreement.

PROPOSED PROCUREMENT SCHEDULE

RFQS Issue Date: October 11, 2021
 Pre-Response Meeting: October 18, 2021
 Solicitation Due Date: November 8, 2021
 Final Evaluation: December 8, 2021
 Interviews (If Necessary): December 2021
 Tentative Council Date: February 2022
 Contract Execution Date: April 2022

COST ESTIMATE:

The professional services fee is estimated to be \$3,000,000.00.

The City anticipates selecting one firm with an estimated authorization amount of \$3,000,000.00

MAJOR AND OTHER SCOPES OF WORK:

Below is a list of the major scopes of work that the City has identified for this project. ****There must be representation for all major scopes of work listed in the prime's statement of qualifications.*** The experience of the firms listed to perform the Major Scopes of Work, whether a subconsultant or prime firm, will be evaluated under Consideration Item 6 – Major Scopes of Work – Comparable Project Experience.

In addition, the City has identified Other Scopes of work that MAY materialize during the course of the project. The City does not guarantee that the scopes listed under Other Scopes of work will materialize on this contract. If the prime consultant intends to enter into a subconsulting agreement on a scope of work not listed below, the prime consultant is required to contact SMBR and request an updated availability list of certified firms in each of the scopes of work for which the prime consultant intends to utilize a subconsultant.

*** Major Scopes of Work**
Civil Engineering

Other Scopes of Work

Permitting Services

Cost Estimating

SUE Services

Environmental Permitting

Environmental Engineering

Geotechnical Engineering

Surveying Services

Traffic and Transportation Engineering

Notes:

- Construction Inspection and Public Information and Communications are **NOT** a subconsultant opportunity. These services will be performed in-house or under a separate contract, if needed, and will be determined when project assignment is made.
- Participation at the prime or subconsultant level may create a conflict of interest and thus necessitate exclusion from future contracting opportunities with the City.
- If the City determines that a conflict of interest exists at the prime or subconsultant level, the City reserves the right to replace/remove the prime or instruct the prime consultant to remove the subconsultant with the conflict of interest and to instruct the prime consultant to seek a post-award change to the prime consultant's compliance plan as described in City Code § 2-9B-23. Such substitutions will be dealt with on a case-by-case basis and will be considered for approval by Small and Minority Business Resources (SMBR) in the usual course of business. The City's decision to remove a prime or subconsultant because of a conflict of interest shall be final.
- A consultant performance evaluation will be performed on all professional services contracts. This evaluation will be conducted at the end of each Design and Construction phase.
- Please review the City of Austin's Public Participation Principles
(<http://austintexas.gov/page/public-participation-principles>)

CITY OF AUSTIN PUBLIC PARTICIPATION PRINCIPLES:

Accountability and Transparency

The City will enable the public to participate in decision-making processes by providing clear information on the issues, the ways to participate, and how their participation contributes to the decision.

Fairness & Respect

The City will maintain a safe environment that cultivates and supports respectful public engagement and will expect participants to do so in turn.

Accessibility

The City will respect and encourage participation by providing ample public notice of opportunities and resources and accommodations that enable all to participate.

Predictability & Consistency

The City will prepare the public to participate by providing meeting agendas, discussion guidelines, notes, and information on next steps.

Creativity & Community Collaboration

(Inclusivity and Diversity)

The City will use innovative, proven, and customized engagement solutions that are appropriate to the needs of the projects and the participants.

Stewards of Resources

The City will balance its commitment to provide ample opportunities for public involvement with its commitment to delivering government services efficiently and using City resources wisely.